REMARKS

Claims 1, 3, 5-8, 10-17 and 20-38 are now the application. Claim 1 has been amended to change "radical polymerization" to read – living radical polymerization--, for purposes of clarifying the recited steps of the process. Basis for this amendment can be found in claim 4.

Claim 20 has been amended to clarify the recited steps of the process. In particular, the first step in claim 20 recites "radical polymerization", and not "living radical polymerization."

Support for new claims 37 and 38 is found in original claims 19 and 20 as filed.

The amendments to the claims do not introduce any new matter.

Claims 1, 3, 4, 9-13, 17, 20, 27 and 30-36 were rejected under 35 U.S.C. § 102(b) as being anticipated by EP 0357036. Claims 5-8, 14-16, 21-24, 28, and 29 were rejected under 35 U.S.C. § 102(b) as being anticipated by or under 35 USC 103(a) as being obvious over EP 0357036.

EP 0357036 fails to anticipate and fails to render obvious the present invention.

In particular, the method according to claim 1 comprises performing living radical polymerization to obtain a macromonomer, and polymerizing the macromonomer.

The method according to claim 20 comprises performing radical polymerization to obtain a macromonomer, and polymerizing the macromonomer in the manner of living radical polymerization.

However, none of the references including EP 035036 specifically discloses living radical polymerization for obtaining a macromonomer, or for polymerizing a macromonomer.

EP 0357036 suggests on page 6, lines 25-40 methods for preparing macromonomers, which comprises conducting anion living polymerization of the methacrylate ester; conducting radical polymerization of the methacrylic ester in the presence of a chain transfer agent; or conducting living polymerization of the methacrylic ester by using a compound such as

ketenetrimethylsilyl acetal as an initiator; or conducting polymerization of the methacrylic ester by using ketenesilyl acetal as an initiator. These polymerization methods are different from living radical polymerization. Page 7, lines 3-5, also states that the copolymerization of the methacryic macromonomer with the acrylic ester is carried out by radical polymerization. However, living radical polymerization is not specifically disclosed.

Claims 1, 3-17, and 20-36 were rejected under 35 U.S.C. 102(b) as being anticipated by or under 35 U.S.C. § 103(a) as being obvious over U.S. patent 5,254,632 to Kerscher et al. Kerscher et al. fail to anticipate or render obvious the present invention.

Kerscher et al. suggests on col. 3, line 55 to col. 4, line 42 that the polymer III, i.e. macromonomer, is prepared by radical polymerization methods. This method can comprise heating the monomer (col. 3, lines 60-61), adding a bifunctional agent HX-OX (col. 4, lines 5-6) such as 2-mercaptoethanol (col. 4, lines 22-25), and adding initiator IN (col. 4, lines 29-30) such as tert-butylperacyl compounds (col. 4, lines 39-42). This method differs from living radical polymerization.

On col. 3, lines 33-51, it is also disclosed that the macromonomers may be reacted via copolymerization with (meth)acrylic acid esters by bulk or solution polymerization using the initiator IN. This method differs from living radical polymerization.

Claims 1, 3-17, and 20-36 were rejected under 35 U.S.C. § 102(b) as being anticipated by or under 35 U.S.C. § 103(a) as being obvious over U.S. patent 5,483,003 to Siol et al. Siol et al. fail to anticipate or render obvious the present invention.

Siol et al. suggest on col. 3, lines 5-7 and col. 4, line 46 methods for producing macromonomers by anionic and cationic "living polymerization", and also radical polymerization. Further, the macromonomers may be produced starting with a precursor which is a compound containing a terminal hydroxyl group (col. 4, lines 31-43). This method differs from living radical polymerization.

Col. 5, lines 8-20, states that the comb polymer may be synthesized from the macromonomer in the form of a solution polymerization using a polymerization initiator, e.g. a peroxide compound.

Therefore, the first recited step in claim 1 and the second recited step in claim 20 is not disclosed or suggested by any of the cited references. Accordingly, the present invention is not anticipated by, and is not obvious over the cited references.

The cited references fail to anticipate the present invention. In particular, anticipation requires the disclosure, in a prior art reference, of each and every recitation as set forth in the claims. *See Titanium Metals Corp. v. Banner*, 227 USPQ 773 (Fed. Cir. 1985), *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 1 USPQ2d 1081 (Fed. Cir. 1986), and *Akzo N.V. v. U.S. International Trade Commissioner*, 1 USPQ2d 1241 (Fed. Cir.1986).

There must be no difference between the claimed invention and reference disclosure for an anticipation rejection under 35 U.S.C. § 102. *See Scripps Clinic and Research Foundation v. Genetech, Inc.*, 18 USPQ2d 1001 (CAFC 1991) and *Studiengessellschaft Kohle GmbH v. Dart Industries*, 220 USPQ 841 (CAFC 1984).

Also, the cited art lacks the necessary direction or incentive to those of ordinary skill in the art to render a rejection under 35 USC 103 sustainable. The cited art fails to provide the degree of predictability of success of achieving the properties attainable by the present invention needed to sustain a rejection under 35 USC 103. See *Diversitech Corp. v. Century Steps, Inc.* 7 USPQ2d 1315 (Fed. Cir. 1988), *In re Mercier*, 185 USPQ 774 (CCPA 1975) and *In re Naylor*, 152 USPQ 106 (CCPA 1966).

Moreover, the properties of the subject matter and improvements which are inherent in the claimed subject matter and disclosed in the specification are to be considered when evaluating the question of obviousness under 35 USC 103. See *Gillette Co. v. S.C. Johnson & Son, Inc.*, 16 USPQ2d. 1923 (Fed. Cir. 1990), *In re Antonie*, 195, USPQ 6 (CCPA 1977), *In re Estes*, 164 USPQ (CCPA 1970), and *In re Papesch*, 137 USPQ 43 (CCPA 1963).

No property can be ignored in determining patentability and comparing the claimed invention to the cited art. Along these lines, see *In re Papesch, supra,In re Burt et al.* 148 USPQ 548 (CCPA) 1966), *In re Ward,*141 USPQ 227 (CCPA 1964), and *In re Cescon,*177 USPQ 264 (CCPA 1973).

In view of the above, consideration and allowance are, therefore, respectfully solicited.

In the event that the Examiner believes an interview might serve to advance the prosecution of this application in any way, the undersigned attorney is available at the telephone number noted below.

The Commissioner is hereby authorized to charge any fees or credit any overpayment associated with this communication including any extension fees to Deposit Account No. 22-0185.

Dated: 7-27-04

Respectfully submitted,

By

Burton A. Amernick
Registration No.: 24,852
CONNOLLY BOVE LODGE & HUTZ, LLP
1990 M Street, N.W., Suite 800
Washington, DC 20036-3425
(202) 331-7111
(202) 293-6229 (Fax)
Attorneys for Applicant